

CLAIMS

WHAT IS CLAIMED IS:

1. A digital video display device, comprising:

a navigation unit operative to isolate an input video signal;

5 a video unit operative to process said input video signal such that said input video signal can be displayed on a progressive display device, said video unit comprising:

a decoder operative to separate said input video signal into a plurality of frames, each frame containing a series of fields; and

10 a video display module comprising a detection unit operative to determine the type of processing to be performed on said input video signal based on information contained within each of said plurality of frames.

15 2. The system of Claim 1, wherein said video display module further includes a processing unit operative to provide a filtered digital video frame signal based on said fields.

20 3. The system of Claim 1, wherein said detection unit is operative to determine the type of processing to be performed on a video frame signal based on particular field data contained within said video frame signal.

25 4. The system of Claim 1, wherein said detection unit is operative to determine the type of processing to be performed on a video frame signal based on the field data of a predetermined number of prior video frames and said video frame signal.

5. The system of Claim 4, wherein said predetermined number of prior video frames is three.

6. The system of Claim 2, wherein said processing unit further comprises a first processing module operative to provide a digital video frame that is a concatenation of fields of an input data frame, and a second processing module operative to provide a digital video frame containing field segments having values based on adjacent field segments.

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7. The system of Claim 3, wherein said particular field data is stored in a table, said table containing the type of processing to be performed on said video frame signal.

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8. A digital video display system, comprising:
a navigation module operative to isolate an input video signal present in a digital medium;
a decoder operative to separate said input video signal into a plurality of video frames;
a detection module operative to detect the type of processing to be performed on said video frame, said detection module including a table which provides the type of processing to be performed on said video frame in response to the current video frame position; and
a processing module operative to provide a filtered video frame in response to information contained in said table, wherein said filtered video frame is capable of being displayed on a progressive display device.

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9. The system of Claim 8, wherein said processing module further comprises a first module operative to provide a video frame signal that is a concatenation of the fields of an input video frame, and a second module operative to provide a video frame signal containing field segments having values based on the values of adjacent field segments.

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10. The system of Claim 8, wherein said detection module is operative to determine the type of processing to be performed on said video frame based on field data of a predetermined number of prior video frames and said video frame.

5 11. The system of Claim 10, wherein the predetermined number of prior video frames is three.

12. A video signal processing method, comprising the steps of:

- (a) obtaining current video information from an input video signal;
- 10 (b) detecting the current frame delimiter from said input video signal;
- (c) determining whether said current frame is within a predetermined time interval;

15 (d) determining the type of processing to be performed on said current frame from a corresponding data table;

(e) generating a video frame in response to predetermined parameters in said data table.

20 13. The processing method of Claim 12, wherein said predetermined parameters are frame dependent.

25 14. A method of processing a video signal to remove artifacts, comprising the steps of:

- (a) separating a video image frame into its component fields;
- (b) determining which of said component fields is the first component field;
- (c) discarding the second component field of said video image frame; and
- (d) generating a combined video image frame signal based only on said first component field.

15. The method of Claim 14, wherein step (d) comprises the steps of:

 - (d1) separating said first component field into alternating pixel lines;
 - (d2) generating a pixel line having a value comprising the average of said alternating pixel lines; and
 - 5 (d3) providing said generated pixel line between said alternating pixel lines.